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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/744,159	01/22/2001	Gerhard Strohm	3547-6	3943

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EXAMINER

OCAMPO, MARIANNE S

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 09/18/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/744,159

Applicant(s)

STROHM ET AL.

Examiner

Marianne S. Ocampo

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6-16-03 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 27 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The

subject matter which is considered new matter is the limitations “clips **circumferentially formed** along an outer side thereof” in lines 2 – 3 of claim 27 and “catch projections **circumferentially formed** along an outer side thereof engageable with the clips” as in lines 4 – 5 of claim 27. There is no evidence or enough support for the clips and catch projections to be circumferentially formed along an outer side of the draining layers, however, there is only support for the clips and catch projections to be formed along an outer side of the draining layers.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 23 – 25, 28 – 29, 39 – 40 and 45 – 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsukamoto et al. (US 4,793,928).

6. With regards to claim 23, Tsukamoto et al. disclose a filter module defining unfiltered and filtered material spaces comprising a separable stack of individual self-contained filter module elements arranged in the stack in a predetermined order in contact with adjacent other ones of the filter module elements without gaps, wherein the filter module elements include:

- an individual self-contained filter region (4) formed of a deep bed filter material, and,
- individual self-contained first and second types of draining layers (8, 13) which include a draining layer material (5) disposed adjacent ones of the filter regions (4), wherein
 - the first type of the draining layers include a sealing element disposed at a side thereof adjacent an unfiltered material space and flow passages (14) disposed at an opposite side thereof adjacent a filtered material space,
 - the second type of the draining layers include a sealing element (18) disposed at a side thereof adjacent the filtered material space and flow passages (9) disposed at an opposite side thereof adjacent the unfiltered material space, with the first and second types of draining layer alternate relative to one another in the stack such that the sealing elements alternately seal the draining layers from filtered and unfiltered material spaces and flow passages alternately establish flow paths between the draining layers and filtered and unfiltered material spaces, as in figs. 1 – 4 and cols. 1 – 6.

7. Concerning claim 24, Tsukamoto et al. further disclose the first and second types of draining layers include flow elements (in the form of outer and inner hub rings 8, 13 & 7, 12,

respectively), for directing flow of material therethrough and the passages including openings (9, 14) formed through a portion of the flow elements (8, 12), as in fig. 2.

8. Regarding claim 25, Tsukamoto et al. further disclose the first and second types of draining layers include flow elements (in the form of outer and inner hub rings 8, 13 & 7, 12, respectively), for directing flow of material therethrough and the passages including grooves (9) formed through a portion of the flow elements (8), as in fig. 2.

9. With respect to claims 28 - 29, Tsukamoto et al. also disclose the sealing and flow elements being formed as an integral self-contained structure with the draining layer material (5), thereby joining with and sealing the draining layer material (5) in a leak-proof manner, as in fig. 4 and col. 3, lines 54 – 58.

10. Regarding claim 39, Tsukamoto et al. further disclose the filter region includes at least one planar filter layer (4), as in fig. 2.

11. Concerning claim 40, Tsukamoto et al. also disclose each of the first and second type of draining layers being a planar structure, as in fig. 2.

13. With regards to claim 45, Tsukamoto et al. further disclose the flow passages include holes (14 & those formed by inlets 9) oriented substantially parallel to the plane of the first and second types of draining layers, as in fig. 2.

14. Regarding claim 46, Tsukamoto et al. also disclose the flow passages include grooves (between 8a and forming the inlets 9) oriented substantially parallel to the plane of the first and second types of draining layers, as in fig. 2.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 30 – 33 and 41 - 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto et al. in view of Pulek et al. (US 2002/0060184 A1).

17. With regards to claim 30, Tsukamoto et al. have disclosed the limitations of claim 23 above. Tsukamoto et al. fail to disclose the filter region including first and second filter layers having different degrees of separation disposed one on top of another.

Pulek et al. teach a filter cell/region for a filter module similar to that of Tsukamoto et al., the filter region of Pulek et al. includes at least a first and a second filter layers (29, 30 or 32, 31) having different degrees of separation (due to difference in material of construction and type of filter media or thickness of each layer) disposed one on top of another, as in figs. 2 – 3 and pages 4 – 7.

It is considered obvious to one of ordinary skill in the art at the time of the invention to modify the filter region of Tsukamoto et al., by adding the embodiment taught by Pulek et al., in order to provide an improved filter region which has the ability to trap/remove different types of contaminants according to their size and also provide a filter module with better particle removal efficiency and longer filter life span (see paragraph 49, page 6 of Pulek et al.).

18. Regarding claim 31, Tsukamoto et al. have disclosed the limitations of claim 23 above. Tsukamoto et al. fail to disclose the filter region including first and second filter layers having the same degree of separation disposed one on top of another.

Pulek et al. teach a filter cell/region for a filter module similar to that of Tsukamoto et al., the filter region of Pulek et al. includes at least a first and a second filter layers (29, 30 or 32, 31) may have the same degree of separation (due to being fabricated of the same material of construction) disposed one on top of another, as in figs. 2 – 3 and paragraph 39, page 5.

It is considered obvious to one of ordinary skill in the art at the time of the invention to modify the filter region of Tsukamoto et al., by adding the embodiment taught by Pulek et al., in order to provide an improved filter region which has the ability to trap/remove more contaminants due to an increase in surface area/contaminant holding capacity and also provide a filter module with better particle removal efficiency and longer filter life span (see paragraph 49, page 6 of Pulek et al.).

19. With respect to claim 32, Tsukamoto et al. have disclosed the limitations of claim 23 above. Tsukamoto et al. fail to disclose the filter region being formed of an absorptive material.

Pulek et al. teach a filter cell/region formed of an absorptive material (filter media formed of combination of fiber, filter aids (such as diatomaceous earth and perlite) for water absorption and resin, as in paragraph 13 of page 2 and paragraph 37 of page 5.

It is considered obvious to one of ordinary skill in the art at the time of the invention to modify the filter region of Tsukamoto et al., by adding the embodiment taught by Pulek et al., in order to provide an improved filter region which not only removes particulates from a fluid (such as dirty oil) being filtered therethrough but having the ability to absorb water for a cleaner fluid/oil filtrate (see paragraph 13).

20. With respect to claim 33, Tsukamoto et al. have disclosed the limitations of claim 23 above. Tsukamoto et al. fail to disclose the filter region including filter materials having different absorption properties (i.e. particle retention capacity or PRC).

Pulek et al. teach a filter region including filter materials having different absorption properties due to difference in filter materials of construction, as in pages 5 – 6.

It is considered obvious to one of ordinary skill in the art at the time of the invention to modify the filter region of Tsukamoto et al., by adding the embodiment taught by Pulek et al., in order to provide an improved filter region which has the ability to trap/remove more contaminants and different types (according to size) of contaminants due to an increase in surface area/contaminant holding capacity and change of PRC, and also provide a filter module with better particle removal efficiency and longer filter life span (see paragraph 49, page 6 of Pulek et al.).

21. Concerning claim 41, Tsukamoto et al. have disclosed the limitations of claim 23 above. Tsukamoto et al. fail to disclose the filter region comprising a plurality of individual planar filter layers.

Pulek et al. teach a filter cell/region for a filter module similar to that of Tsukamoto et al., the filter region of Pulek et al. comprising a plurality (two or more) individual planar filter layers, as in fig. 3.

It is considered obvious to one of ordinary skill in the art at the time of the invention to modify the filter region of Tsukamoto et al., by adding the embodiment taught by Pulek et al., in order to provide an improved filter region which has the ability to trap/remove more contaminants due to an increase in surface area/contaminant holding capacity and also provide a

filter module with better particle removal efficiency and longer filter life span (see paragraph 49, page 6 of Pulek et al.).

22. With regards to claim 42, Tsukamoto et al., as modified by Pulek et al., have disclosed the limitations of claim 41 above. Tsukamoto et al. as modified by Pulek et al. further teach at least some of the filter layers could be formed a filter material having the same filtration properties (i.e. those formed of the same material of construction and same zeta-potential), as in paragraph 39. The same motivation applied above in claim 41 is being applied here.

23. Regarding claim 43, Tsukamoto et al., as modified by Pulek et al., have disclosed the limitations of claim 41 above. Tsukamoto et al. as modified by Pulek et al. further teach one or more (i.e. all) zones/filter layers being formed of the same filter material of construction, thereby providing same filtration properties (i.e. ability to trap the same type of contaminants), as in paragraph 39 of page 5. The same motivation applied above in claim 41 is being applied here.

24. With regards to claim 44, Tsukamoto et al., as modified by Pulek et al., have disclosed the limitations of claim 41 above. Tsukamoto et al. as modified by Pulek et al. further teach at least some of the filter layers having different filtration properties (due different composition (includes DE or perlite) or different types of filter materials) compared to other filter layers, as in paragraphs 37 – 38 of page 5.

It is considered obvious to one of ordinary skill in the art at the time of the invention to modify the filter region of Tsukamoto et al., as modified by Pulek et al., by further adding the embodiment taught by Pulek et al., in order to provide an improved filter region which not only removes particulates from a fluid (such as dirty oil) being filtered therethrough but also may have the ability to absorb water for a cleaner fluid/oil filtrate, and ability to trap different and more contaminants due to an increase in surface area/contaminant holding capacity and also provide a filter module with better particle removal efficiency and longer filter life span (see paragraph 49, page 6 of Pulek et al.).

25. Claims 26, 34 – 35 and 38 rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto et al. in view of Müller (US 3,333,702).

26. Concerning claims 26 and 34, Tsukamoto et al. have disclosed the limitations of claims 23 and 24 or 25 above. Tsukamoto et al. fail to disclose at least one of the sealing elements and flow elements include connectors between the filter region and adjacent one of the first and/or second types of draining layers.

Müller teaches a filter module having a sealing/flow element (defined by the frame 2) including a connector (7, 8) between a filter region (3) and adjacent draining layer (2), as in figs. 1 – 2.

It is considered obvious to one of ordinary skill in the art at the time of the invention to modify the filter module of Tsukamoto et al., by adding the embodiment of Müller, in order to

provide a means for coupling and stacking a filter region/element to an adjacent draining/support frame for a simple and trouble-free assembly of the filter module.

27. Regarding claim 35, Tsukamoto et al., as modified by Müller, have disclosed the limitations of claim 34 above. Tsukamoto et al., as modified by Müller, also teach the connectors (7, 8) protruding from the filter plate (3) into an adjacent sealing/outer ring portion of the frame (2). Having the location of the connectors being opposite (i.e. protruding from the sealing element into an adjacent filter element) of the claimed invention, the case law, *In re Japikse*, 86 USPQ 70 (CCPA 1950), has established that a prima facie case of obviousness exists and that the limitation of *having the connectors protrude from the sealing elements into an adjacent filter region, which is opposite that of Tsukamoto et al. as modified by Müller*, is not considered an invention since the applicant is merely shifting the position of the connectors to a different position and the operation of the device (filter module) would not be modified by doing so.

28. With regards to claim 38, Tsukamoto et al., as modified by Müller, have disclosed the limitations of claim 34 above. Tsukamoto et al., as modified by Müller, also teach the sealing elements (formed by outer rings of the frame and filter elements) including interconnected projections (8) and clips (7), as in figs. 1 – 2. The same motivation applied in claim 34 above is applied here.

Art Unit: 1723

29. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto et al. in view of Wiseburgh et al.(US 2002/0134732 A1).

30. With respect to claim 36, Tsukamoto et al. have disclosed the limitations of claim 23 above. Tsukamoto et al. fail to disclose the draining layer material includes a plastic non-woven material.

Wiseburgh et al. teach a draining layer material (14) for a filter module which includes a plastic non-woven material, as in paragraph 44 in page 3 and paragraphs 57 – 59.

It is considered obvious to one of ordinary skill in the art at the time of the invention to modify the draining layer material of the filter module of Tsukamoto et al., by adding the embodiment taught by Wiseburgh et al., in order to provide an improved draining layer material which would not damage or corrode easily compared to its metallic counterparts and provide an alternative light-weight material of construction, thereby making the module lighter in weight and more durable compared to having metallic drainage layers.

Response to Arguments and Amendments

31. Applicant's arguments and amendments with respect to claims 23 – 26 and 28 - 46 have been considered but are moot in view of the new grounds of rejection based on newly applied prior art US 4,793,928 to Tsukamoto et al., in combination with US Patent Application

Publication 2002/0060184 to Pulek et al., US Patent Application Publication 2002/0134732 to Wiseburgh et al., and US Patent 3,333,702 to Müller.

Allowable Subject Matter

32. Claim 27 would be allowable if rewritten to overcome the rejection under 35 U.S.C. 112, first paragraph, set forth above (see paragraphs 2 – 3) in this Office action and to include all of the limitations of the base claim and any intervening claims.

33. The following is a statement of reasons for the indication of allowable subject matter: None of the prior art applied and searched has disclosed or rendered obvious a filter module having all the limitations of claim 23, and further having the limitation of one of the first and second draining layers include clips circumferentially formed along an outer side thereof and another of the first and second draining layers include catch projections circumferentially formed along an outer side thereof and engageable with the clips.

Conclusion

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne S. Ocampo whose telephone number is (703) 305-

Art Unit: 1723

1039. The examiner can normally be reached on Mondays to Fridays from 8:30 A.M. to 4:30 P.M..

34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on (703) 308-0457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

35. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


M.S.O.


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